

DOBRZENIECKI, Jozef, mgr.inz.

On small business. Przegl techn 81 no.12:4-5 Mr '60.

MATZ, Laszlo, dr.; DOBZSEVICS, Sandor, dr.

Cyst originating from the urothelium germ. Magyar. lap. 26 no.4:
238-239 JI '63.

1. A Nagykanizsai Városi Tanács Kórház (igazgató: Fendler Károly dr.)
nőgyógyászati osztályának (főorvos: Gedeon Gyula dr.) közleménye.

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DOBRZHANSKAYA, A.K.

Studies on the higher nervous function (first and second signal systems
in Itsenko-Cushing disease. Zh. vysshei nerv. deiat. 3 no.1:119-129
Jan-Feb 1953. (CIML 24:2)

1. Institute of Psychiatry of the Ministry of Public Health USSR.

DOBRZHANSKAYA, A.K.

Pathophysiological mechanism of certain psychic changes in Itsenko-Cushing's disease. Klin.med. 31 no.3:55-60 Mr '53. (MLRA 6:5)

1. Institut psikhiatrii Ministerstva zdavookhraneniya SSSR.
(Pituitary body--Tumors)

DOBREZHANSKAYA, A.K.

DOBREZHANSKAYA, A.K.

Characteristics of cortical function and correlations between the signal systems in acute phase of schizophrenia. Zhur.vys.nerv. deiat. 4 no.4:502-511 J1-Ag '54. (MIRA 8:3)

1. Institut psikhiiatrii Ministerstva zdavookhraneniya SSSR.
(SCHIZOPHRENIA, physiology,
cerebral cortical funct. & correlation between signal
systems)
(CEREBRAL CORTEX, in various diseases,
schizophrenia, cortical funct. & signal systems)

DOHRZHANSKAYA, A.K.

Dynamics of the restoration of disorders in the interrelation of the first and second signal systems in reactive states [with English summary in insert]. Zhur.vys.nerv.diat. 6 no.5:663-671 S-O '56.

(MLRA 10:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy psikhatrii im. prof. Serbskogo.

(HYSTERIA, physiol.

cerebral cortex activity & interrelation of first & second signal systems)

(CEREBRAL CORTEX, in various dis.

hysteria, cortical funct. & interrelation of first & second signal systems)

DOBRZHANSKAYA, A.K., kand. med. nauk.

Korsakoff's syndrome in Itsenko-Cushing disease. Probl. endokr. i gorm.
4 no.5:85-88 S-0 '58. (MIRA 11:12)

1. Iz Instituta psikhatrii Ministerstva zdavookhraneniya SSSR (dir. -
prof. D.D. Fedotov) i Vsesoyuznogo instituta eksperimental'noy endokmi-
nologii (dir. - prof. Ye. A. Vasyukova).

(KORSAKOFF'S SYNDROME, compl.

Cushing synd. (Rus))

(CUSHING SYNDROME, compl.

Korsakoff's synd. (Rus))

DOBRZHANSKAYA, A.K., kand.med.nauk (Moskva)

Mental disorders in Itsenko-Cushing's disease [with summary in English]. Probl.endok. i gorm. 4 no.6:56-61 N-D '58. (MIRA 12:2)

1. Iz Instituta psikiatrii Ministerstva zdravookhraneniya SSR (dir. - prof. D.D. Fedotov) i Vsesoyuznogo instituta eksperimental'noy endokrinologii (dir. - prof. Ye.A. Vasyukova).

(CUSHING'S DISEASE, compl.
mental disord. (Rus))

(MENTAL DISORDERS, etiol. & pathogen.
Cushing's dis. (Rus))

DOBRZHANSKAYA, A.K.

Treatment of reactive conditions with electronarcosis, Probl.
sud.psikh. 8:345-362 '59. (MIRA 13:6)
(Mental illness) (Electric anesthesia)

DOBZHAVSKAYA, A.K.

Aminazine therapy of some forms of reactive conditions. Probl.
sud.psikh. 8:374-387 '59. (MIRA 13:6)
(Mental illness) (Chlorpromazine)

DOBZHANSKAYA, A.K.

Effect of aminazine on the higher nervous activity during reactive states occurring with excitation phenomena [with summary in English]. Zhur.vys.nerv.deiat. 9 no.1:22-29 Ja-F '59. (MIRA 12:3)

1. Serbsky Central Research Institute of Forensic Psychiatry, Moscow.
(CHLORPROMAZINE, effects,
on conditioned reflex activity (Rus))
(REFLEX, CONDITIONED, eff. of drugs on,
chlorpromazine (Rus))

DOBRZHANSKAYA, A.K.

Treatment of depressive states with iprazid. Zhur.nerv.i psikh.
59 no.12:1485-1488 '59. (MIRA 13:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy psikhiat-
rii imeni Serbskogo (dir. - dotsent G.V. Morozov), Moskva.
(IPRONIAZID ther.)
(PSYCHOSIS MANIC DEPRESSIVE ther.)

DOBRZHANSKAYA, A.K.; SMIRNOVA, M.L.

Treatment with tofranil of depressive states. Zhur. nev. i
psikh. 62 no.2:207-209 '62. (MIRA 15:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut sudebnoy
psikhiatrii imeni Serbskogo (dir. - dotsent G.V. Morozov),
psikhonevrologicheskiy dispanser Kiyevskogo rayona (glavnyy
vrach M.L. Smirnova), Moskva.

(IMIPRAMINE)
(DEPRESSION, MENTAL)

DOERZHANSKAYA, A.K.; RUSANOV, F.D.

Occupational therapy of reactive states. Zhur.nevr.i psikh. 61
no.10:1555-1556 '61. (MIRA 15:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut sudebnoy
psikhiatrii imeni Serbskogo (dir. - dotsent G.V.Morozov), Moskva.
(OCCUPATIONAL THERAPY) (NEUROSES)

DOBRZHANSKAYA, A.K.

Delimitation of chronic reactive states from schizophrenia.
Prak.sudebnopsikh.ekspert. no.4:10-16 '61. (MIRA 16:2)
(REACTION-TIME) (SCHIZOPHRENIA)

DOBRZANSKAYA, A.K.

Some problems in treating chronic forms of the reactive disease.
Prob.sud.psikh.10:172-186 '61.

(PSYCHIATRY)

(MIRA 16:7)

GOL'BER, L.M., prof., ctv. red.; DOERZHANSKAYA, A.K., kand.
med. nauk, red.; PAVLIKHINA, L.V., kand. biol. nauk, red.

[Materials of the 3rd Scientific Conference of Young Scientists] Materialy tret'ey Nauchnoi konferentsii molodykh uchenykh. 1964. Moskva, Vses. nauchno-issl. in-t eksperimental'noi endokrinologii, 1964. 109 p. (MIRA 18:5)

1. Nauchnaya konferentsiya molodykh uchenykh. 3d, 1964.

DOBRZHIANSKAYA, M. A. ALKALINITY AND PROPERTIES INDEX

ca 2

The alkalinity of the Black Sea water. M. A. DOBRZHIANSKAYA. *Bull. acad. sci. union rep. soviet. social.*, Classe sci. phys.-math., 1930, No. 4, 351-01. — The detns. were performed by Ruppia's method and the results expressed in mg.-equiv. For the Black Sea waters the coeff. of Brennecke was used and at the salinity of 18-22‰ it was possible to presume an alk. of about 1.15-1.50 mg.-equiv., but actually this value is 3.00-4.40 or 2.5-3 times higher than that which was supposed theoretically. Most of the alk. is explained by the primary and strong alk. of the Ruznic basin. The vertical variation is explained by dividing the water into an upper zone (to a depth of 100-200 m.) and a lower or remaining zone. The alk. decreases with depth in the upper zone although the salinity increases. The min. values are found at 150-200 m. This decrease in alk. depends upon the distribution of salts brought in by rivers. The alk. in the lower zone increases with depth, reaching its max. at the bottom. This increase in the lower zone depends on the process of the sulfate reduction at these depths, as a result of which the sulfates are changed to carbonates and sulfides. There is no apparent relation between salinity and alk. The ratio of alkalinity to chlorides is different at various depths, the value changing within the limits of 0.2700-0.3438. It is doubtful whether a salinity-Cl ratio can ever be detd.

RUBELL C. FEN

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

DOBREZHANSKAYA, M.A.

~~Sevastopol'skaya biologicheskaya stantsiya Akademii nauk SSSR.~~
"Turbid water" in the depths of the Black Sea. Priroda 42 no.12:113 D '53.
(MLRA 6:11)

1. Sevastopol'skaya biologicheskaya stantsiya Akademii nauk SSSR.
(Black Sea)

DOBRZHANSKAYA, M.A.
DOBRZHANSKAYA, M.A.

Phytoplankton production in the Black Sea according to the data
of photosynthesis. Trudy SBS 8:303-314 '54. (MIRA 11:1)
(Black Sea--Phytoplankton) (Photosynthesis)

DOBKZHANSKAYA, M. A.

~~DOBKZHANSKAYA, M. A.~~

Phytoplankton production in the Black Sea according to the data
of photosynthesis. Trudy SBS 8:315-319 '54. (MIRA 11:1)
(Black Sea--Phytoplankton)
(Photosynthesis)

DOBZHANSKAYA, M. A.

USSR/Geophysics - Static oceanography

Card 1/1 Pub. 22 - 17/47

Authors : Dobrzanskaya, M. A.

Title : About nitrates in the Black Sea

Periodical : Dok. AN SSSR 99/1, 61-64, Nov 1, 1954

Abstract : The quantitative content of nitrates in the Black Sea and its bays is described. Variations in the nitrate contents, depending on season, depth and location (with respect to the distance from shore), are pointed out. Ten references; 6-USSR (1930-1948). Table; diagrams.

Institution : The Sevastopol Biological Station of the Acad. of Scs. of the USSR

Presented by: Academician N. M. Strakhov, August 4, 1954

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000410710013-4

DOUBT, HHHW, SK, HHH, MHH.

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000410710013-4"

Dobrazhanskaya, M. A.

AUTHOR	Dobrazhanskaya, M.A.	20-4-34/60
TITLE	The Seasonal Peculiarities in the vertical Distribution of Oxygen within the Zone of Photosynthesis in the Black Sea. (Sezonnyye osobennosti vertikal'nogo raspredeleniya kisloroda v zone fotosintez Chernogo Morya.)	
PERIODICAL	Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 4, pp. 755-758 (USSR)	
ABSTRACT	The oxygen observations, in which the determination of O ₂ was carried out every meter within the layer of the largest temperature variations, disclosed several specific features of its distribution according to season. From fig. 1 A-B follows that in the warm season in the sea districts far from the shore in the zone of photosynthesis a certain maximum layer develops as well in regard to the absolute content as to the percentage of relative saturation. A smaller maximum manifests itself already in spring. At this season the variation of the O ₂ content according to depth takes place gradually, without sudden jumps. In summer, at the time of the most marked division of temperature layers, the O ₂ maximum reaches its	
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20-4-34/60

The Seasonal Peculiarities in the Vertical Distribution of Oxygen within the Zone of Photosynthesis in the Black Sea.

highest stage of development as well in absolute as in relative values. In August 1951 the O_2 content at the same place in a depth of 120-140 m amounted to 8-9 ml/l and the saturation 120-140 %. The ultimate limit of the O_2 maxima now lies deeper than in April. Toward the end of fall (November) the layer with O_2 maximum conserved. The maximum is relatively reduced as compared to August, but still surpasses that of April. Simultaneously the thickness of the upper layer with a uniform O_2 content increased to 20-25 m. The O_2 maximum layer in all above-mentioned three seasons usually depends on the layer of largest temperature variations. The highest O_2 values correspond to the highest temperature gradients. In proportion to the blurring of the thermal division of layers the O_2 in the vertical is assimilated. Thus the O_2 content is in all depth uniform in winter. The O_2 maximum, or its excess, as compared to the winter quantities was in this mass of water formed in the courses of photosynthesis. In August the consumption of O_2 in oxidation processes in most cases exceeds its

CARD 2/4

20-4-34/60

The Seasonal Peculiarities in the Vertical Distribution of Oxygen within the Zone of Photosynthesis in the Black Sea.

supply in the upper horizons (0,10, 0-15 m) . In depths of 20-25 m conditions are just the opposite. For spring and summer the vertical O_2 distribution is in good agreement with the distribution of the phytoplankton and with the daily production of O_2 . The direct influence of the layer of the density jump, as a physical factor, is probably intensified by the optimum conditions of illumination and temperature which develop in its vicinity for several populations. Thus the intensive formation of O_2 is not restricted to the layer of temperature jump alone. The increase in temperature reduces the solubility of O_2 . Therefore the entire O_2 excess which develops in the upper, heated and easily stirable layers escapes into the atmosphere. In the layer below the jump O_2 is given off slower. Thus the quantity of O_2 and its vertical distribution in the zone of photosynthesis are on the whole determined by 3 factors:

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20-4-34/60

The Seasonal Peculiarities in the Vertical Distribution of Oxygen within the Zone of Photosynthesis in the Black Sea.

- 1) by the intensity of the photosynthesis and by the depth position of its optimum,
 - 2) by the quantity and the character of the vertical distribution of temperature, and
 - 3) by the depth of intensive mixture.
- From this point of view the peculiarities of the vertical distribution of O_2 which are observed at different seasons may be understood.
- There are 1 figure, and 5 Slavic references.

ASSOCIATION:

Sevastopol Biological Station AN USSR ineni
A.O. Kovalevskiy.
(Sevastopol'skaya biologicheskaya stantsiya ineni
A.O. Kovalevskogo Akademii nauk SSSR)

PRESENTED:

SUBMITTED:

AVAILABLE:

By A.P. Vinogradov, Academician, July 9, 1956
July 6, 1956
Library of Congress.

CARD 4/4

17,4

AUTHORS:

Dobrzhanskaya, M. A., Pshenina, T. I. SOV/20-123-5-35/50

TITLE:

Some Data on the Content and Distribution of Iron in the Black Sea (Nekotoryye dannyye o sodержanii i raspredelenii zheleza v Chernom more)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 5, pp 895-897 (USSR)

ABSTRACT:

Publications contain but scanty data on the problem mentioned in the title (Refs 1,3). In the present paper the authors present the determination results of dissolved and suspended iron fraction by the α, α -dipyridyl method, modified, more or less, according to reference 2. The determinations were made (a) in the central deep-sea region of the eastern half of the sea, (b) in the northwestern region (with a marked freshwater influence). The seasonal fluctuations were measured at the mouth of the bay of Sevastopol'. Table 1 shows the results. In most cases, the fraction of dissolved iron was absent at all depths. An exception was deep-sea water (from 1,000-1,500 to 2,000 m), in which 6-20 mg/lm³ of dissolved Fe could be detected. Roughly, this content corresponds with that of the ocean. Table 2 shows the content of the suspended iron fraction.

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Some Data on the Content and Distribution of Iron in the Black Sea SOV/20-123-5-35/50

Despite the wide range of values, the following rules in the horizontal and vertical distributions of iron in the Black Sea can be established: (a) Sections with a marked influence of the outflow from the mainland have maximum contents; (b) in the regions close to the shore the iron content is comparatively higher; (c) in the surface strata of the central region of the sea, especially in the halistatic (khalistaticheskiy) zones (apparently zones with constant salt content) the iron content is slightly lower than in (a) and (b) (Fig 1). These 3 regions also differ with regard to the vertical iron distribution. Maximum contents are found in the range of the upper 300 m of the deep-sea region (Fig 1). The absolute maximum is found in the stratum of maximum salt content fluctuations. From 300 to 500 m, the iron content decreases rapidly with increasing depth. The minimum suspension fraction content can be detected between 500 and 1,000-1,500 m (down to $7 \text{ mg/m}^3 \text{ Fe}$). With increasing depth the content rises; at a depth of approximately 2,000 m, due to an increase in the dissolved fraction, it attains values similar to those on the surface (about $26 \text{ mg/m}^3 \text{ Fe}$). Along the shores the iron content rose with increasing

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Some Data on the Content and Distribution of Iron in the Black Sea SOV/20-123-5-35/50

depths to the bottom of the sea. The minute iron particles from detritus and feces are apparently arrested by water strata of greater density. Larger particles pierce this barrier and enrich the lower strata. In the photosynthesis zone no marked differences from the other seas can be found (Ref 4). Seasonal fluctuations of the iron content could not be observed. In the Black Sea, iron is not the factor which limits the development of phyto-plankton. There are 1 figure, 3 tables, and 5 references, 3 of which are Soviet.

ASSOCIATION: Sevastopol'skaya biologicheskaya stantsiya im. A. O. Koval-evskogo Akademii nauk SSSR (Sevastopol' Biological Station imeni A. O. Kovalevskiy of the Academy of Science of the USSR)

PRESENTED: June 3, 1958, by N. M. Strakhov, Academician

SUBMITTED: May 5, 1958

Card 3/3

DOBRZHANSKAYA, M.A.

Nature of vertical distribution of oxygen in the upper 100-meter layer of the central part of the Black Sea as related to the time of the year. Trudy SBS 11:284-296 '59.

(MIRA 13:5)

(Black Sea--Water--Oxygen content)

DOBRZHANSKAYA, M.A.; PSHENINA, T.I.

Some data on the amount and distribution of dissolved and
suspended iron in waters of the Black Sea. Trudy SBS 11:316-326
'59. (MIRA 13:5)
(Black Sea--Iron)

DOBRZHANSKAYA, M.A.

Availability of biogenic elements in the zone of photosynthesis of
the Black Sea. Trudy SBS 12:396-400 '59. (MIRA 14:10)
(BLACK SEA--WATER--COMPOSITION)

DOBRZHANSKAYA, M.A.

Main features of the hydrochemical regime of the Black Sea.
Trudy SBS 13:325-378 '60. (MIRA 14:3)

1. Po rabotam Sevastopol'skoy biologicheskoy stantsii AN SSSR.
(Black Sea--Sea water--Composition)

DOBRZHANSKAYA, M. A.

Cand Geog Sci - (diss) "Basic features of the distribution and dynamics of phosphates in the Black Sea." Sevastopol', 1961. 21 pp; (Academy of Sciences USSR, Inst of Oceanology); number of copies not given; price not given; (KL, 10-61 sup, 208)

DOBRZHANSKAYA, M. A.

Dissertation defended in the Institute of Oceanography for the
academic degree of Candidate of Geographical Sciences: 1962

"Main Features of the Dynamics and Distribution of Phosphates in
the Black Sea."

Vestnik Akad Nauk No. 4, 1963, pp. 119-145

DOBREZHANSKAYA, M.A.

Content and distribution of organic matter in the Black Sea;
based on oxidizability. Trudy SBS 16:472-487 '63.

Content and distribution of nitrites in the Black Sea.
Ibid.:488-495 (MIR 12:6)

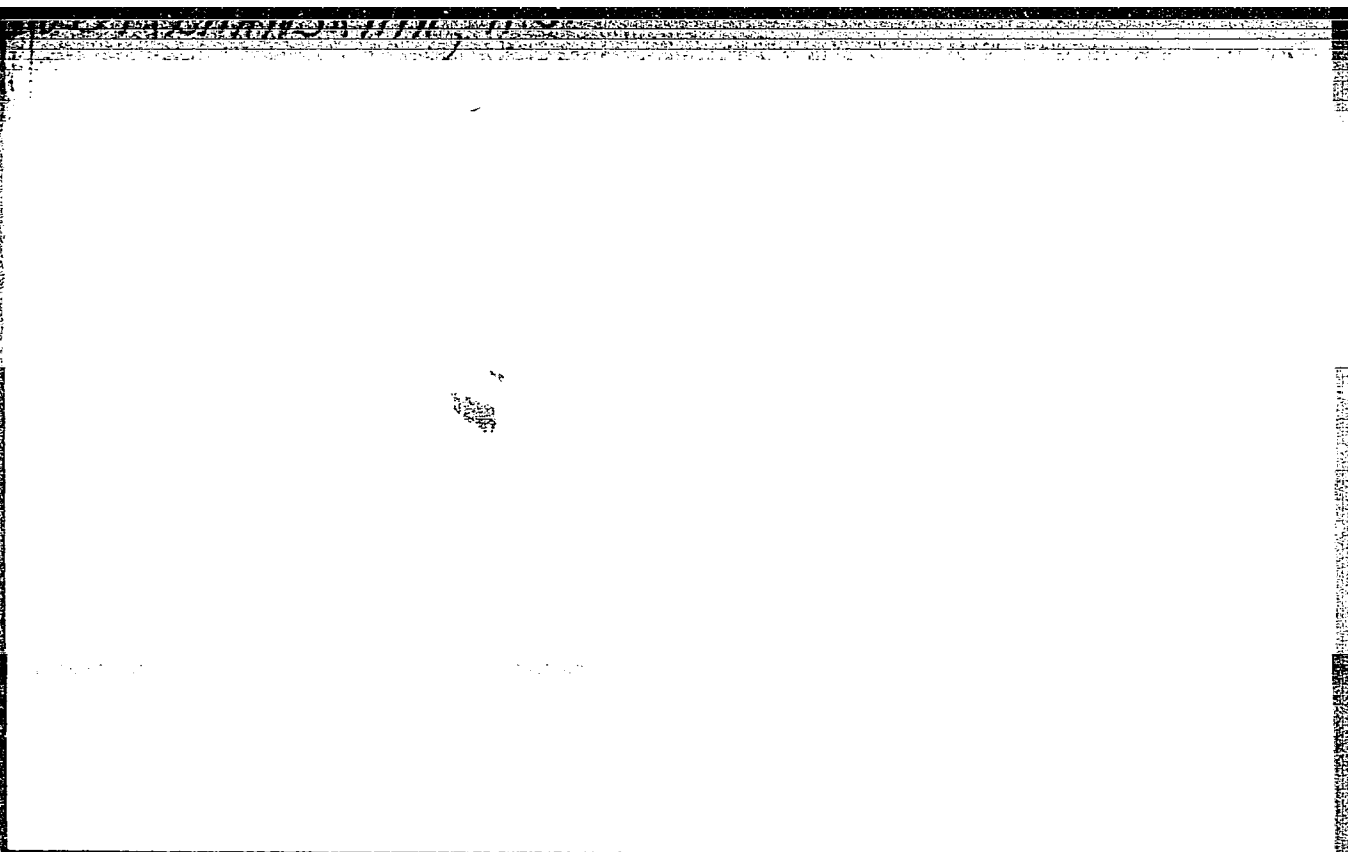
NETREBA, M.M.; SOBOLEV, M.Ya.; DOBRZHANSKAYA, M.V. (Khar'kov) /

"Pseudosyringomyelia" syndrome in periarthritis of the shoulder
joint. Vrach.delo no.1:141-143 Ja '63. (MIRA 1642)

1. TSentral'naya klinicheskaya psikhonevrologicheskaya i neyro-
khirurgicheskaya bol'nitsa Ministerstva putey soobshcheniya.
(SHOULDER—DISEASES) (SYRINGOMYELIA)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000410710013-4



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CIA-RDP86-00513R000410710013-4"

EXCERPTA MEDICA Sec 13 Vol 13/8 Dermatology Aug 59

2060. THE PROPHYLAXIS OF SUPPURATIVE SKIN DISEASE IN THE NEW-BORN (Russian text) - Dobrzhan'skaya R. S. and Stefanovskaya N. V. - ZDRAVOOKHR. TURKM. 1957. 1 (25-27)

2,862 case histories of deliveries and the newborn were reviewed. The minimum incidence of disease is in January, the maximum in July (82%). The number of cases of suppurative skin disease in premature children increases in March, June, and November, and decreases in February, May, and October. There were no deaths in the group of premature children. The development of pyoderma in premature children depends not so much on the rise of temperature of the environment, as on the mother's health, the general condition of the child, its vigour, and the care given by the nursing staff. Contagious disease (impetiginous streptodermatitis and epidemic pemphigus) is found in the newborn mainly during summer. Sweat rashes are not infrequently complicated by staphylococcal infection. For its prevention, painting with 0.5% iodine and powdering with xeroform is recommended. Impetiginous streptodermatitis is found only two thirds as often as staphylo-dermatitis, but is more contagious.

(S)

EXCERPTA MEDICA Sec 13 Vol 13/8 Dermatology Aug 59

2081. PRESENCE OF HELMINTHS IN PATIENTS WITH CERTAIN SKIN DISEASES (Russian text) - Dobrzhanskaya R. S., Turkmen Dermatovener. Res. Inst., Ashkhabad - TRUDY TURKM. KOZHNO-VENER. INST. (Ashkhabad) 1957, 5 (200-203)

In 15 out of 170 patients with various pruritic dermatoses, the presence of helminths was diagnosed (including 6 out of 99 eczema patients, 4 out of 40 cases of pruritus of the skin and one out of 3 patients with urticaria). Eight of the 15 cases were treated for helminths; the treatment resulted in the complete disappearance of the condition in 2 cases of pruritus of the skin and in one patient with neurodermatitis; some improvement was noted in 2 patients with skin diseases.

References 4.

Mashkilleison Jr - Moscow (S)

DOBRZHANSKAYA, R.S.

Epidemic pemphigus among the newborn in Turkmenistan. Zdrav. Turk.
2 no.4:12-15 J1-Ag '58. (MIRA 12:6)

1. Iz Turkmenskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo
institute (dir. - doktor med. nauk N.F. Rodyakin).
(TURKMENISTAN--PEMPHIGUS)
(INFANTS(NEWBORN)--DISEASES)

DOBRZHANSKAYA, R.S.

Treatment of the tuberculoid form of cutaneous leishmaniasis.
Zdrav. Turk. 4 no.4:8-14 J1-Ag '60. (MIRA 13:9)

1. Iz Turkmenskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - prof. N.F. Rodyakin).
(DELHI BOIL) (ANTIMONY—THERAPEUTIC USE)
(GLUCONIC ACID—THERAPEUTIC USE)

DOBRZHANSKIY, M.B., kand. med. nauk

Tuberculoid form of cutaneous leishmaniasis: etiology, pathogenesis, clinical aspects and treatment. Vest. akad. i ven. no. 1: 29-34 '64. (MIRA 17:11)

1. Turkmen'skiy nauchno-issledovatel'skiy institut kozhnykh bolezney (dir. - kand. med. nauk M.E. Erashov; nauchnyy rukovoditel' - prof. N.F. Rodyakin).

DOBRZHANSKAYA, R.S., kand.med.nauk

Cutaneous leishmaniasis of the eyeball. Vest. dermat. i ven. 38
no.3:83-86 Mr '64. (MIRA 18:4)

1. Turkmensk: nauchno-issledovatel'skiy institut kozhnykh bolezney
(dir. - kand.med.nauk M.E.Ereshov; nauchnyy rukovoditel' - prof.
N.F.Rodyakin), Ashkhabad.

DOBRZHANSKAYA, Z. S.; POD'YACHEVA, I. B.

Cement

Method of determining individual oxides of alkali metals in raw material and in clinkers. TSement 19, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

ARONS, Ya.A., inzh.; DOBRZHANSKIY, A.A., inzh.

The new S-386P motor tank for cement transportation. Stroi.i dor.
mashinostr. 4 no.5:17 My '59. (MIRA 12:7)
(Cement--Transportation) (Commercial vehicles)

ARONS, Ya.A., inzh.; DOBRZHANSKIY, A.A., inzh.; MACHERET, I.G., inzh.

New design and operation of hoisting machinery in building.
Stroi.i dor.mashinostr. 4 no.9:12-14 S '59.

(Hoisting machinery)

(MIRA 12:11)

The Use of Carbon Dioxide Instead of Oxygen in the Deter-

137-58-5-10971

DOB R Z H A N S K I Y , A . V .
Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 296 (USSR)

AUTHORS: Valov, G.G., Dobrzhanskiy, A. V., Zhukhovitskiy, A.A.

TITLE: Analysis by Beta-ray Reflection (Analiz metodom otrazheniya
 β -izlucheniya)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp.
pravl., 1956, Vol 4, pp 22-29. Comments pp 30-31

ABSTRACT: A description is presented of an instrument for analysis of the percentage content of heavy elements by β -ray reflection. When radioactive radiation passes through a substance, the interaction of β particles with the atomic nuclei of the substance causes the particles to be deflected from their original direction. The intensity of the reflected β radiation (RI) is approximately proportional to $Z^{2/3}$, where Z is the charge on the nucleus or the atomic number of the element. Consequently, the RI may be employed to judge the composition of the substance. Tl^{204} , with a half life of 2.7 years, is used as a source of β radiation. 20 millicuries of Tl^{204} are placed on the bottom of a Pb cup which directs the beam of electrons (E) upward onto the specimen under investigation. The reflected E pass through a filter to an

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Analysis by Beta-ray Reflection

ionization chamber with a cylindrical tinplated brass body 300 mm in diameter and height. The collecting electrode, in the form of a centrally-positioned pin, is introduced into the chamber through a polystyrene insulator and is under a potential of +300 v relative to the housing. The thickness of the filter is selected experimentally so that the majority of the E reflected from the heavy element will pass through it, and the E reflected from the rest of the substance will be retained therein. The result may thus be attained that the magnitude of the RI is in linear relation to the content of heavy element. The RI passing through the filter ionizes the air in an ionization chamber. The resultant weak ionizing current is amplified and delivered to a galvanometer. To prepare the specimen, 10 or 20 g of the material, reduced to powder for analysis in the usual way and screened through a 100-mesh sieve, is sifted into a metal adapter, the bottom of which may be made of any material transparent to β rays, e.g., tracing cloth. The powder is gently packed by tapping the adapter against the table. Analysis is performed either by plotting a graduated curve against standard specimens or by comparison with a standard. The method has been used specifically for determination of Fe in Fe ore and of W in high-speed steel. The employment of this method in analysis of Fe ore shows that its accuracy corresponds to that of rapid chemical analysis, but the time is reduced to 1.5-2.0 min. The method is simple in execution and

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137-58-5-10971

Analysis by Beta-ray Reflection

does not consume any reagents whatever. The instrument is compact and can be used anywhere. The immediate and prospective value of this new method are noted in the discussion.

T.M.

1. Beta rays--Reflection
2. Heavy elements--Analysis

Card 3/3

TKACHENKO, N.S.; DAVIDENKO, P.I.; DOBRZHANSKIY, A.V.

Determination of metallic iron in the presence of oxidizing agents
and free calcium oxide. Zav.lab. 29 no.5:536-538 '63. (MIRA 16:5)

1. Gikyuzhruda.

(Iron--Analysis) (Oxidizing agents)

STEPIN, Vasil'y Vasil'yevich; SILAYEVA, Yelizaveta Vasil'yevna;
PLISS, Anastasiya Mikhaylovna; KURBATOVA, Vera Ivanovna;
KRYUCHKOVA, Lidiya Merkur'yevna; PONOSOV, Vladimir Il'ich;
DYMOV, A.M., doktor khim. nauk, prof., red.; FEDOROV, A.A.,
st. nauchn. sotr., red.; TKACHENKO, N.S., inzh., red.;
DOBRZHANSKIY, A.V., st. inzh., red.; LEVIT, Ye.I., red. izd-
va; ISLENT'YEVA, P.G., tekhn. red.

[Analysis of ferrous metals, alloys and manganese ores] Ana-
liz chernykh metallov, splavov i margantsevykh rud. [By] V.V.
Stepin i dr. Moskva, Metallurgizdat, 1964. 498 p.

(MIRA 17:3)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii (for Dymov, Fedorov, Tkachenko, Dobrzhanskiy).

IKONNIKOV, V.V., prof., red.; DOBREZHANSKIY, A.Ye., red.; KHAVAYEV, N.I.,
tekh.red.

[Financing and issuing credit to the national economy] Voprosy
finansirovaniia i kreditovaniia narodnogo khoziaistva. Pod red.
V.V.Ikonnikova. Moskva, 1959. 167 p. (MIRA 12:11)

1. Moscow. Gosudarstvennyy ekonomicheskiy institut.
(Finance)

SHEMYAKIN, I.N.; DOBRZHANSKIY, A.Ye., red.; KHAVAYEV, N.I., tekhn.red.

[Socialist transformation in the U.S.S.R. and its economic prerequisites] Sotsialisticheskie preobrazovaniia v SSSR i ikh ekonomicheskie predposylki. Moskva, M-va vysshego obrazovaniia, 1959. 210 p. (MIRA 13:2)

1. Moscow. Gosudarstvennyy ekonomicheskii institut. 2. Zaveduyushchiy kafedroy Istorii narodnogo khozyaystva Moskovskogo gosudarstvennogo ekonomicheskogo instituta.
(Russia--Economic conditions)

SAVCHENKO-BEL'SKIY, A.A., dot; DOBRZHANSKIY, A. Ye., red.; KHAVAYEV, N.I.,
tekhn.red.

[Shelterbelt forestry; a lecture] Zashchitnoe lesorazvedenie;
leksiia. Moskva, Mosk.gos.ekon.in-t, 1959. 51 p.

(MIRA 13:4)

(Windbreaks, shelterbelts, etc.)

S/564/57/000/000/017/029
D258/D307

AUTHORS: Belyayev, L. M., Bitovskiy, B. V., and
Dobrzhanskiy, G. P.

TITLE: Methods of growing luminescent crystals for
scintillation counters

SOURCE: Rost kristallov; doklady na Pervom soveshchanii
po rostu kristallov, 1956 g. Moscow, Izd-vo
AN SSSR, 1957, 249-261

TEXT: A brief survey of crystalline organic and inorganic
scintillations is first given, presenting the data in tabular
form. An apparatus is described and illustrated in which crystals
of naphthalene, diphenylacetylene, dibenzyl, and other compounds
may be grown, indicating the general procedure, and an apparatus
for stilbene crystals is proposed. The difficulties of growing
large anthracene crystals are discussed, and a description is
given of a suitable apparatus. For inorganic scintillators, the

Card 1/2

Methods of growing...

S/564/57/000/000/017/029
D258/D307

authors give an account of the modifications made by them to the apparatus of Kyropolous for growing crystals of alkali halides, and of a vacuum equipment used for calcium tungstate. The experimental assistance of Z. B. Perekalina, G. S. Belikova, V. V. Chadayeva, K. S. Chernyshev, M. V. Koshuashvili, V. A. Perl'shteyn, and I. N. Tsigler is acknowledged. There are 8 figures and 2 tables.

Card 2/2

Dobrzhanskiy G.F.

120-6-28/36

AUTHORS: Distler, G.I., Bondarenko, K.P., and Dobrzhanskiy, G.F.

TITLE: A Polarizing Attachment to the WKC-11 Infra-red Spectrometer (Polyarizatsionnoye prispobleniye k infrakrasnomu spektrometru IKS-11)

PERIODICAL: Pribery i Tekhnika Eksperimenta, 1957, No.6,
pp. 106 - 108 (USSR)

ABSTRACT: The WKC-11 infra-red spectrometer is widely used in the USSR. A simple polarising attachment to this spectrometer was developed at the Institute of Crystallography of the Ac.Sc.USSR (Institut Kristallografii, AN SSSR). The polarising element consists of 8 polished plates of silver chloride 0.2 - 0.25 mm thick. The set of plates is at about 26° to the beam and is isolated from metal parts since silver chloride reacts strongly with metals. Provision is made for the rotation of the specimens and the device as a whole. The instrument has an average transmission of 30 to 40% and the degree of polarisation is 99 to 100%. The instrument can be used in the region 1 - 20 μ . Fig.1 shows a sectional drawing of the device; Fig.2 its general appearance and Fig.3 a typical spectrum obtained. There are 3 figures,

ASSOCIATION: Institute of Crystallography of the Academy of Sciences
Card 1/2 of the USSR

REGEL', V.R.; GOVOROV, V.G.; DOBRZHANSKIY, G.F.

Effect of the temperature and the rate of deformation on the
parameters of tension curves for silver chloride single crystals.
Opt.-mekh. prom. 25 no.6:28-32 Je '58. (MIRA 11:10)
(Crystallography) (Silver chloride)

DOBZHANSKIY, G. F.

24(2) PAGE 1 BOOK EXHIBITION 807/2335

Academy nauk SSSR. Institute Kristallografi

Book Kristallografi, tom. 2 (Growth of Crystals, Vol. 2) Moscow, 1979. 298 p.

Books also listed. 2,000 copies printed.

Book. Ed. A. V. Shubnikov, Academician, and E. N. Zhuravskiy, Doctor of Geological and Mineralogical Sciences. Ed. of Publishing House: E. N. Zhuravskiy. Mosk. Ed. V. Polzunov.

REPORT: This book is intended for scientists and researchers engaged in crystallography and in growing industrial monocystals.

CONTENTS: This is the second of two volumes on crystal growth. The first volume contains reports delivered at the First Congress on Crystal Growth. The second volume also contains an extensive study of growth of crystals. The book is intended for scientists and researchers engaged in crystallography and in growing industrial monocystals. The book contains some essentially new results obtained by Soviet scientists. The editors express the hope that the progress of crystal growth and in growing industrial monocystals. The progress of crystal growth and in growing industrial monocystals. The progress of crystal growth and in growing industrial monocystals.

Monographs are given at the end of each article.

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Monographs are given at the end of each article.

Monographs are given at the end of each article.

BELYAYEV, L. M., BELIKOVA, G. S., DOBRZHANSKIY, G. P.

Crystallizer for growing organic crystals in the melt. Rost krist.
28102-104 '59. (MIRA 13:8)
(Crystallization)

24.7100

76010

SOV/70-4-5-32/36

AUTHORS: Belyayev, L. M., Vitovskiy, B. V., Dobrzhanskiy, G. F.
TITLE: Some Changes in the Methods of Crystal Growth
PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 791-794 (USSR)

ABSTRACT: The three changes successfully tested by the authors are: (1) The temperature at the face of a crystal growing of molten phase changes because of the changing solid liquid ratio, changing concentrations of admixtures, etc. Consequently, the composition of grown crystals may be uniform. To avoid the temperature change, a heater was placed in the molten phase and slowly pulled toward the growing crystal to maintain its temperature, controlled by a thermocouple, constant. (2) The crystals whose solubility hardly changes with temperature are usually grown by evaporation of the solution, for example, in the crystallizer developed by Robinson. The changed variety of the method provides constant temperature of a growing crystal and

Card 1/4

Some Changes in the Methods of Crystal Growth

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SOV/70-4-5-32/36

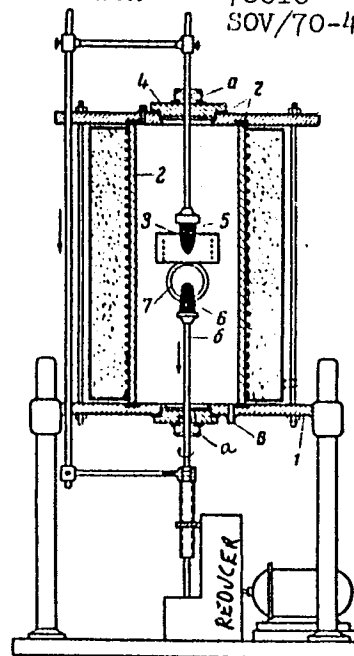
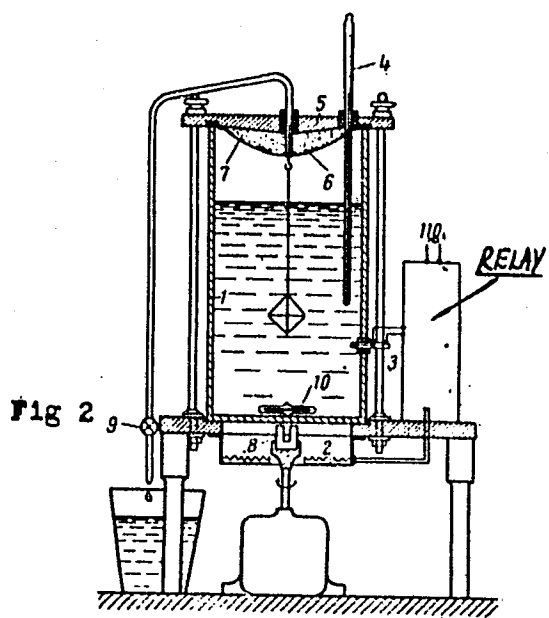
absorption of the vapor. The crystallizer (Fig. 2) consists of glass container 1, placed upon electric heater 2, adjuster 3 providing a constant temperature, thermometer 4, cap 5, mantle 6 for holding vapor-absorbing cotton 7, capillary pipe with cock 9 to control draining of the condensed vapor, rotating magnet that rotates stirring rod 10. (3) Verneille's method of crystal growth of molten phase is changed as shown in Fig. 3. The quartz tube of the chamber crystallizer, placed on plate 1, is heated by winding. Crystal holder 8 extending through Wilson's packing a joins reducer that transmits rotation from motor to the crystal holder providing the latter's rotation at the rate of 2 rpm. Cap 4 and other parts join through vacuum packing. The chamber is pumped out to high vacuum or filled in with inert or any other gas through pipe B. The compressed powder briquet 5 of the compound to be crystallized is placed in protecting mantle 3 with heating winding in, and is coaxial with the crystal or its seed 6 stuck on the rotating crystal holder. The briquet-to-crystal distance is controlled by moving the

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Some Changes in the Methods of Crystal Growth

76010

SOV/70-4-5-32/36



Card 3/4

Some Changes in the Methods of Crystal Growth

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SOV/70 4-5-32/36

briquet-holding shaft up or down. The heater of the protecting mantle melts the briquet gradually; the molten matter drops upon the crystal and provides its growth. The X-ray diffraction data proved that the grown crystals were monocrystals. There are 4 figures; and 3 Soviet references.

ASSOCIATION: Crystallographical Institute of the Academy of Sciences of the USSR (Institut kristallografi AN SSSR)

SUBMITTED: May 23, 1959

Card 4/4

24.7100

(6011
SOV/70-4-5-33/36

AUTHORS: Belyayev, L. M., Dobrzhanskiy, G. F., Chadayeva, V. V.,
Panova, V. P., ~~Isrekalina, Z. B.~~, Varfalomeyeva, V. N.

TITLE: Growing Activated Lithium Fluoride Crystals

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 794-795 (USSR)

ABSTRACT: The admission of impurities into the structure of LiF
crystals to activate them for detection of thermal
electrons, as for example for use in scintillators, is
difficult, because of certain crystal-chemical properties
of the crystals. The authors have grown LiF crystals by
the Kyropoulos method in open Pt crucibles. In each
case, a seed was attached to a cooler, protected by a
Pt mantle. Mg, Al, Fe, Cu, Ga, In, and U compounds were
added to the readily molten LiF. The luminiscence and
absorption spectra were examined by monochromatizer UM-2
and spectrophotometer SF-4 respectively. The excitation
by ultraviolet rays disclosed the highest luminescence
of LiF(Mg) crystals and of those activated by uranyl

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Growing Activated Lithium Fluoride Crystals

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SOV/70-4-5-33/36

compounds. The former showed higher absorption than LiF, especially of ultraviolet rays. The luminescence intensity of the LiF(Mg) crystals increases with the duration of aging of the molten phase prior to crystallization. The excitation of the LiF crystals, activated by uranyl compounds, was high by both electron beams and X-rays. The scintillation intensity of LiF(U) crystals was about 4% of that of NaI(Tl). There are 4 figures; and 4 references, 2 Soviet, 1 German, 1 U.S. The latter is: R. S. Moon, Phys. Rev., 13, 1210-1211, 1948.

ASSOCIATION: Crystallographical Institute of the Academy of Sciences of the USSR (Institut kristallografii AN SSSR)

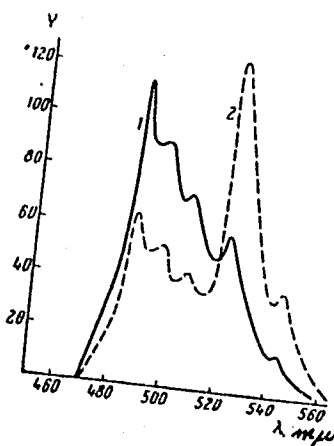
SUBMITTED: June 15, 1959

Card 2/3

Growing Activated Lithium Fluoride Crystals

76011

SOV /70-4-5-33/36



Card 3/3

Fig. 4. Luminescence Spectra of the LiF Crystals
Activated by: (1) $\text{UO}_2(\text{NO}_3) \cdot 6\text{H}_2\text{O}$ and (2) $\text{UO}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$.

8/070/60/003/003/003/017
 8132/50
 AUTHORS: Balyshev, L.M., Perakelis, Z.B., Varfolomeyeva, V.N.,
 Panova, V.P. and Dordzhantskiy, G.I.
 TITLE: The Luminescent Properties of Lithium Fluoride
 Activated by Uranium A
 PERIODICAL: Kristallografiya, 1960, Vol. 5, No. 5,
 pp. 737 - 760

TEXT: Crystals of LiF - U were grown by the Kirovskiy method
 in air. Uranium was introduced as uranyl nitrate. The crystals
 in concentrations of 0.01 to 0.5 wt.%. Crystals with 0.01%
 activator had a blue-green luminescence and with 0.02% and above
 a yellow-green luminescence. The spectra of the luminescence
 excited by a mercury lamp (110K-4) with a YAC-1 (UFS-1)
 filter were measured with a YM-2 (UM-2) monochromator and an
 03Y-32 (FEU-32) photomultiplier. Absorption spectra were
 measured on a CO-4 (SP-4) spectrophotometer. The spectra are
 reproduced in figures 1 and 2. The bands of the luminescence
 displaced. The absorption spectrum was also displaced towards
 Card 1/2

the long wavelength region. It is shown that the presence of an
 oxidizing atmosphere which permits the formation of the U⁶⁺ ions
 is a necessary condition for the activation of the crystal by
 uranium during its growth. The dependence of the luminescence and
 absorption in the crystal on the concentration of the activator
 permits the use of luminescence analysis for studying the processes
 by which the impurities are distributed during the growth of crystals.
 There are 4 figures and 7 references: 5 Soviet and 2 English.

ASSOCIATION: Institut Kristallografi AN SSSR (Institute of
 Crystallography of the AS USSR)
 SUBMITTED: March 11, 1960

Card 2/2

850 00

9,2180

S/048/60/024/010/009/033
B013/B063

AUTHORS: Sonin, A. S., Zheludev, I. S., Dobrazhanskiy, G. F.

TITLE: The Piezoelectric Properties of NaNO₂ ✓

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 10, pp. 1209 - 1212

TEXT: The rule governing the variations of point symmetry during piezo-
electric phase transitions, which was established by one of the authors
and L. A. Shuvalov in Refs. 1 and 2, enabled the authors to develop a
crystal-physical criterion for the determination of new piezoelectric
substances. The question as to whether this criterion is really neces-
sary and, if any, sufficiently exact, could not be answered so far
and, therefore, requires further experiments on compounds with given
changes of symmetry. Here, the authors describe the piezoelectric pro-
perties of NaNO₂. The sodium nitrate monocrystals bred by I. V. ✓

Gavrilova at the beginning of 1958 could, due to their high electrical
conductivity, not be used for dielectric measurements. The crystals

Card 1/3

The Piezoelectric Properties of NaNO_2 85000
S/048/60/024/010/009/033
B013/B063

examined in the present work were grown from a chemically pure trade-marked material melting at 271°C , using a modified method described by Obreimov and Shubnikov in Ref.10. The measurements were made by means of Vobzer's water thermostat between room temperature and 100°C and by means of a thermostat filled with an organo-silicon solution No. 5 between 100° and 200°C . The dielectric constant was measured at 500 kilocycles. Figs. 1 and 2 show the temperature dependence of the dielectric constant on three crystallographic axes. It may be seen that the dielectric constants have distinct peaks at the phase-transition temperatures. A Scheme providing for the compensation of conductivity (Ref.11) was used to study the dielectric hysteresis loops at 50 cycles. The shape of the hysteresis loop at 165°C (Fig.3) is indicative of the high conductivity of the crystal. Spontaneous polarization and coercive force were calculated from the hysteresis loops. The temperature dependences of these quantities are illustrated in Figs. 4 and 5. The shape of the hysteresis loops and the temperature dependence of the coercive force indicate the considerable hardness of NaNO_3 between room temperature and 147°C , the spontaneous polarization and the coercive

Card 2/3

85000.

The Piezoelectric Properties of NaNO_2

S/048/60/024/010/009/033
B013/B063

force decreasing near the Curie point. The deviation of the authors' results from the values mentioned in Ref.9 is related to the varying conditions of crystal growth. The authors thank V. I. Pakhomov and G. M. Lobanova for the preparation of the samples; I. Fenina for assistance in the experiments; and L. A. Shuvalov and I. S. Rez for a discussion of the measurements. The present paper was read at the Third Conference on Piezoelectricity, which took place in Moscow from January 25 to 30, 1960. There are 5 figures and 11 references: 6 Soviet.

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography of the Academy of Sciences USSR)

Card 3/3

41341

S/081/62/000/017/005/102
B166/B180

18.9500

AUTHORS: Bagdasarov, Kh. S., Dobrzhan'kiy, G. F., Il'in, N. P.

TITLE: Universal arrangement for growing single crystals at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 33, abstract 17B194 (In collection: Rost kristallov. v. 3. M., AN SSSR, 1961, 254 - 257. Discuss., 501 - 502)

TEXT: A prototype has been developed which can be used for growing crystals by any method based on crystallization from the melt. It is noted that crystals can be grown in this unit both in a vacuum of up to 10^{-5} mm Hg or in a gaseous medium at pressures of up to 2 atm. Two methods of heating are suggested: induction and electric. The merits of the plant are discussed, and the procedure for various methods of crystallization. [Abstracter's note: Complete translation.]

Card 1/1


S/070/61/006/001/010/011
EO73/E335

AUTHORS: Karpenko, A.G., Belyayev, L.M., Vitovskiy, B.V.
and Dobrzhanskiy, G.F.

TITLE: Crystalliser for Growing Crystals by the Evaporation
Method

PERIODICAL: Kristallografiya, 1961, Vol. 6, No. 1,
pp. 146 - 147

TEXT: In spite of numerous advantages of this method
it has been relatively little used. Its main drawbacks are
a decrease in the volume of the mother liquor during
crystallisation, loss of solvent during evaporation (important
in the case of poisonous or expensive solvents) and
impossibility of obtaining a continuous process of crystal-
lisation without having to fill the crystalliser with saturated
solutions. The latter is particularly important in crystal-
lising substances which are difficult to dissolve. The authors
propose a design of crystalliser which enables continuous
crystallisation by evaporation in a closed crystalliser without
loss of the solvent, maintaining a constant level of the
Card 1/8



S/070/61/006/001/010/011
E073/E335

Crystalliser for Growing

mother liquor. The crystalliser does not require any pumping systems or any other forcing devices for maintaining a constant level and the desired degree of saturation of the solution. Transfer of the substance to be crystallised from the solution zone into the space where crystallisation takes place and maintenance there of the required saturation are by means of natural circulation, including evaporation of the solvent, its condensation, return of the condensate into the zone of solution of the substance and movement of the solution into the zone of crystal growth. The crystalliser, Fig. 1, is mounted on an electric heater and contains all the apparatus for maintaining and controlling the temperature. It consists of three coaxial vessels, fitted one inside the other, in such a way that the first (external) and the second (middle) intercommunicate at the top whilst the second and third (inner vessels) intercommunicate from the bottom. The edges of the first and third vessels should be above the level of the mother liquor, whilst the edge of

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S/070/61/006/001/010/011
E073/E335

Crystalliser for Growing

the second is a few cm below the level of the mother liquor. The first vessel is intended for dissolving the crystallised substance and for receiving the condensate. It also serves as a settling vessel and a thermostat. The second vessel serves as a carrier of the solution and has a seal preventing the falling of germinations from the zone of dissolution into the crystalliser. The third (internal) vessel is the crystalliser. The communication between the lid of the crystalliser and the first cylinder is by means of a ground surface. In a crystalliser of this design, a "continuous" complicated cycle of mass transfer from one state into another takes place. The crystalliser is filled with a solution which is saturated at a given temperature. The degree of filling can be seen from Fig. 1. At the bottom, between the walls of the first and the second vessels, the excess material is fed in which is considerably greater than the weight of the crystal to be produced. The geometric dimensions of the vessels are so chosen as to obtain an evaporation surface in

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S/070/61/006/001/010/011
E073/E335

Crystalliser for Growing


the first and the second vessels, which is considerably smaller than the surface in the third vessel. During operation of the crystalliser condensation of the solvent will occur at the inner surface of the lid and the top part of the first vessel. The lid is made semispherical or conical so as to ensure that the condensate returns only into the first vessel where dissolution of the recrystallised substance takes place as a result of continuous inflow of solvent. Since the vessels intercommunicate, a constant hydrostatic level difference is maintained, which is governed solely by the difference in the density of the solution in the first and third vessels and in the system as a whole constant concentration flows will establish themselves, as shown by arrows in Fig. 1. The solvent evaporated from the third vessel is replaced by a quantity of solution of equal mass from the first vessel. In this way, there will be a continuous transfer of the crystallising substance from the solution zone into the

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E073/E335

Crystalliser for Growing

crystalliser, as a result of which a constant saturation is maintained in the crystalliser. The specific degree of saturation will become established at a given temperature which hardly changes at all with the growth of the crystal. Under otherwise equal conditions the degree of saturation and consequently the speed of growth of the crystal is controlled by changing the temperature of the solution. Furthermore, equipment can be designed which permits changing (increasing in the case of a positive temperature coefficient of the solubility) the evaporation surface of the first and the second vessels in accordance with a given programme. The temperature field of the crystalliser has a small gradient directed from the bottom upwards. The thermal effects of the reactions in the system are localised and can be easily taken into consideration. Mechanical mixing of the solution in the crystalliser is by means of a magnetically actuated mixer. The reliability of the described crystalliser was verified under laboratory conditions for a number of substances, Card 5/8



S/070/61/006/001/010/011
E073/E335

Crystalliser for Growing

including substances of low solubility. Figure 2 gives a photograph of the equipment. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography of the AS USSR)

SUBMITTED: May 26, 1960

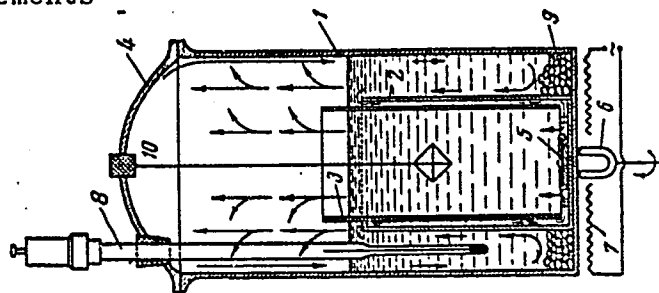
Card 6/8

S/070/01/006/001/010/011
E073/E535

Crystalliser for Growing

Fig. 1:

- 1 - first (external) vessel
- 2 - second (middle) vessel
- 3 - third (internal) vessel
- 4 - lid
- 5 - magnetic mixer
- 6 - magnet
- 7 - electric heating elements
- 8 - contact thermometer
- 9 - substance to be crystallised
- 10 - germination



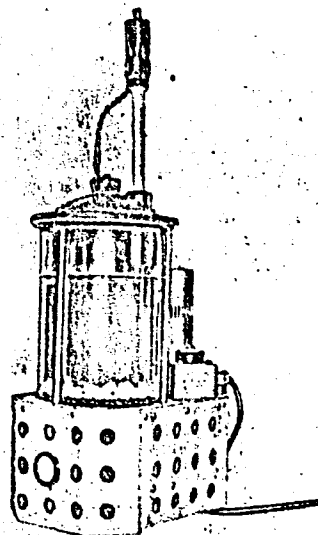
Card 7/8

S/070/61/006/001/010/011
E073/E335

Crystalliser for Growing

Fig. 2:

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BELYAYEV, L.M.; BITOVSKIY, B.V.; DOBRZHANSKIY, G.F.; KARPENKO, A.G.

Modified crystallization tank. Kristallografiia 6 no.2:286-287
Mr-Ap '61. (MIRA 14:9)

1. Institut kristallografii AN SSSR.
(Crystallization)

24.3500

22196
S/048/61/025/004/045/048
B117/B209

AUTHORS: Belyayev, L. M., Dobrzhanskiy, G. F., and Feofilov, P. P.

TITLE: Luminescence of uranium-activated lithium- and sodium fluoride single crystals

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 548-556

TEXT: The present paper was read at the 9th Conference on Luminescence (Crystal Phosphors) and contains data on the luminescent properties of uranium-activated lithium- and sodium fluoride single crystals. The single crystals were grown from a melt according to a method by Kyropoulos. The activator in the form of uranyl nitrate was added in concentrations of 0.01 to 0.3%. In the visible range of the absorption spectra of the crystals concerned, weak bands with a clear structure as well as a strong absorption in the ultraviolet range with several blurred maxima can be observed at room temperature. When temperature is lowered to that of liquid nitrogen, the long-wave bands are split up into a large number of very narrow lines. The luminescence of LiF-U and of NaF-U single crystals

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22196

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B117/B209

Luminescence of uranium-activated ...


may be excited in the long-wave region of the absorption bands as well as in the ultraviolet region. The structural character of the luminescence spectra is clearly distinct already at room temperature. Cooling gives rise to many lines the width of which in many cases is only fractions of an angstrom. Many of the lines can be counted as resonance lines since they occur in the luminescence- as well as in the absorption spectra. The only law which so far has been found in low-temperature luminescence spectra is the existence of equidistant series which contain particularly bright lines that have been always observed in all samples. In general, the luminescence of LiF-U and NaF-U single crystals excited by linearly polarized light is partly polarized. The degree of polarization clearly depends on the mutual position of the crystallographic axes of the sample and on the electric vector of the exciting light (azimuthal dependence), on the wavelength of the exciting light (polarization spectrum), and on the wavelength in the luminescence spectrum. In the study of the azimuthal dependence (provisional results for LiF-U are found in Ref. 5: P. P. Feofilov, Optika i spektroskopoya, 7, 842 (1959)) the authors found an orientation of the luminescence centers along the fourth-order symmetry axis. The curves taken for the

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Luminescence of uranium-activated ...

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B117/B209

dependence of the degree of polarization on the wavelength in the luminescence spectrum showed a characteristic, though not quite understandable shape. (The authors thank P. I. Kudryashev for the device by means of which the curves were taken). This shape can hardly be the object of a serious discussion since it is the rather complex result of superimposition of elementary radiations, which are clearly manifest in the investigation of cooled crystals. The polarization spectra of the crystals examined resemble essentially the polarization spectra of most of the dyes. The presence of highly polarized lines in the luminescence spectra of the crystals concerned permits employing the method of the luminescence polarization diagrams which has been suggested by S. I. Vavilov (Ref. 11: Zh. eksperim. i teor. fiz., 10, 1363 (1940) and Sobr. soch. 2, 58, 1952). With the help of this method, the nature (multipole order) of elementary oscillators can be clearly determined in most cases. The results of the determination of the multipole order are compiled in the table, showing that the long-wave section of the luminescence spectrum is formed by linear oscillators. The group of short-wave lines in the LiF-U spectrum is described by circular oscillators σ_e and σ_m . The results of these



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Luminescence of uranium-activated ...

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studies show that the luminescence of hexavalent uranium ions is to be regarded as a superposition of forced electric and magnetic dipole radiations. It was found that one of the two principal electron vibration series observed in the spectra of the crystals concerned is formed by electric, the other by magnetic emitting dipoles. The sub-series in the NaF-U spectrum are also formed by one kind of emitters, viz., either by electric or by magnetic ones. In this way, the level schemes shown in Fig. 9 can be set up. They describe the principal lines in the relatively long-wave section of the spectrum of these crystals, which begins with the resonance lines of the longest wavelength. I. P. Shapiro is mentioned. There are 9 figures, 1 table, and 16 references: 13 Soviet-bloc and 3 non-Soviet-bloc.

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Legend to the Table: The nature of elementary oscillators at -183°C ;
A. In the LiF-U luminescence spectrum; B. In the NaF-U luminescence
spectrum; 1), 2), 3), 4), and 5) - types of oscillators.

Природа элементарных осцилляторов при -183°

А. В спектре люминесценции LiF—U					Б. В спектре люминесценции NaF—U				
λ, Å	1) Тип осциллятора	λ, Å	2) Тип осциллятора	λ, Å	3) Тип осциллятора	λ, Å	4) Тип осциллятора	λ, Å	5) Тип осциллятора
4828	σ_e	5017	σ_m	5210	π_e	5528	$\pi_e (e_0)$	5944	π_e
4882	σ_e	5024	σ_m	5240	π_m	5636	$\pi_m (m_0)$	5970	π_m
4920	σ_e	5052	σ_m	5245	π_e	5676	π_e	5977	π_e
4941	σ_e	5057	σ_e	5278	$\pi_m (m_0)$	5690	π_e	5998	$\pi_e (e_2)$
4948	σ_m	5067	σ_m	5285	π_e	5703	π_e	6066	π_m
4993	σ_m	5136	σ_e	5410	$\pi_e (e_1)$	5753	$\pi_e (e_1)$	6087	π_m
5002	σ_m	5185	$\pi_e (e_0)$	5511	$\pi_m (m_1)$	5812	π_m	6124	$\pi_m (m_2)$
5012	σ_m	5195	π_m	5635	$\pi_e (e_2)$	5836	π_m	6229	π_e
				5764	$\pi_m (m_2)$	5870	$\pi_m (m_1)$	6263	$\pi_e (e_3)$

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Luminescence of uranium-activated ...

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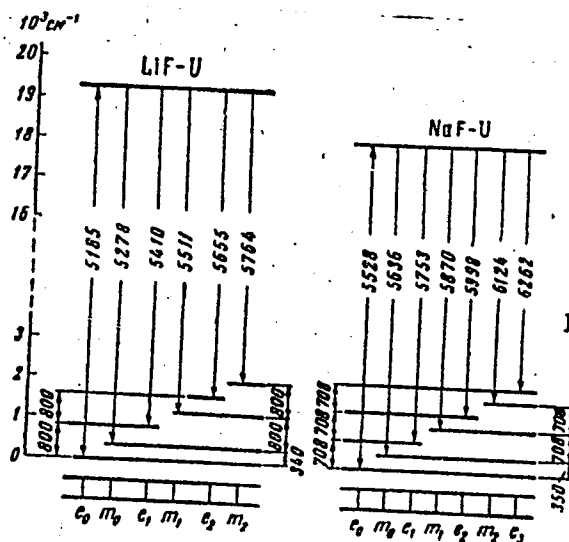


Fig. 9

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GRUM-GRZHIMAYLO, S.V.; BRILLIANTOV, N.A.; VOLKOVA, N.V.; DOBRZHANSKIY, G.F.;
SVIRIDOV, D.T.

Light absorption spectra of nickel ammonium sulfate monocrystals
at temperature from 290° to 1.7°K. Kristallografiia 7 no.1:
84-88 Ja-F '62. (MIRA 15:2)

1. Institut kristallografii AN SSSR i Moskovskiy gosudarstvennyy
universitet im. M.V. Lomonosova.
(Nickel ammonium sulfate crystals---Spectra)

SHASKOL'SKAYA, M.P.; DOBRZHANSKIY, G.F.; Prinimali uchastiye:
KUGAYENKO, O., student; MALAKHOV, G., student; PILIPENKO, N.,
student

Relation between the distribution of dislocations near the
indentation mark and the strength of a crystal. Kristallo-
grafiia 7 no.1:103-106 Ja-F '62. (MIRA 15:2)

1. Moskovskiy institut stali i Institut kristallografii AN
SSSR. 2. Moskovskiy institut stali (for Kugayenko, Malakhov,
Pilipenko).

(Dislocations in crystals)

L 26482-65 EWT(m)/EWP(j) Pc-4 RM
ACCESSION NR: AR5004855

S/0058/64/000/011/0000/0000

SOURCE: Ref. zh. Fizika, Abs. 11E263

AUTHORS: Dobrzhanskiy, G. F.; Perekalina, Z. B.; Sorokina, V. V.

TITLE: Procedure for growing stilbene crystals in sealed test tubes using oriented primers

CITED SOURCE: Sb. Stsintillyatory i stsintillyats. materialy. Khar'kov, Khar'kovsk., un-t, 1963, 54-55

TOPIC TAGS: stilbene, single crystal, crystal growth, oriented primer

TRANSLATION: An improved procedure of growing stilbene single crystals is described. Unlike the presently employed procedure of growing in open test tubes it is proposed to carry out the process in sealed ampoules using oriented primers. It was established experimentally that the primer must be oriented along the cleavage plane; a method is described for preparing such primers. The crystallizing substance in the form of compressed tablets is fed on top of a primer,

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L 26482-65

ACCESSION NR: AR5004855

which is lowered to the bottom of the test tube. The procedure prevents the position of the substance and ensures safety of the operating personnel against the toxic action of the stilbene vapor. Ye. Givargizov.

SUB CODE: SS

EDCL: 00

Card 2/2

DOERZHANSKIY, Georgiy Fedorovich

In the hothouses of crystals. IUn.tekh. 7 no.4:57-59 Ap '63.
(MIRA 16:4)

1. Starshiy inzhener laboratorii iskusstvennogo rosta kristallov
Instituta kristallografi AN SSSR.
(Crystals—Growth)

L 12810-63 EWP(j)/EPF(c)/EWT(1)/EWT(m)/BDS AFFTC/ASD/ESD-3 Pc-4/
Pr-4/Pi-4 GG/RM/WW/JW/IJP(C)

ACCESSION NR: AP3000791

S/0070/63/008/003/0482/0483 8/

AUTHOR: Belyayev, L. M.; Vlokh, O. G.; Gil'varg, A. B.; Dobrzanskiy, G. F.; Netesov, G. B.; Shamburov, V. A.; Shuvalov, L. A. 80

TITLE: Linear electrooptical effect in crystals of hexamethylenetetramine 7
(urotropin) C sub 6 H sub 12 N sub 4

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 482-483

TOPIC TAGS: hexamethylenetetramine, urotropin, electrooptical effect, ZnS, CuCl, electrooptical constant

ABSTRACT: This study was undertaken because the only two commonly employed crystals with sufficient electrooptical effect for practical use (ZnS and CuCl) are generally of unsatisfactory quality or are difficult to obtain. The authors obtained hexamethylenetetramine by sublimation in a vacuum and found it to form well-developed rhombic dodecahedrons. In polarized light the specimens exhibit a dark cross in the middle of the field and a black border about the edge, with four light areas in the centers of the four quadrants. When an electrical field was impressed at right angles to the direction of light propagation, voltages up to 10 kv, the light patches became dark and the dark areas lightened. This effect proved to be linear, the change depending on the applied voltage. Because of this
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L 12810-63

ACCESSION NR: AP3000791

linear effect it was impossible to determine precisely the electrooptical constant. A preliminary approximation was made, however, by measuring total transmission when the crystal was between crossed polarizing plates and by comparing this value with the voltage applied. Similar measurements were made through the central part of the dark cross. Results show hexamethylenetetramine to be as satisfactory as previously used material. It also has two other pass bands in the infrared region of the spectrum. (orig. art. has: 2 figures.

ASSOCIATION: Institut kristallografi AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 02Feb63

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AT4040552

S/2564/64/004/000/0039/0044

AUTHOR: Dobrzhanskiy, G.F.; Shaskol'skaya, M.P.

TITLE: Inheritance of the defects of a deformed inoculum by a crystal

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, n. 4, 1964, 39-44

TOPIC TAGS: crystallography, crystal growth, deformed inoculum, deformed seed crystal, lithium fluoride, sodium chloride, potassium chloride, alkali halide, crystal defect, lattice defect, polygonization

ABSTRACT: The improved Kiropoulos method described previously was used in a study of crystal growth from a melt with deformed seed crystals of LiF, NaCl and KCl. The seed crystals were plastically bent, compressed, stretched or twisted. The monocrystals grown were cleaved, and the side face (010) was examined by selective etching. Lauegrams showed that the onset of crystal growth is preceded by polygonization, i.e., restoration of the original structure of the seed crystal, entailing rearrangement of the dislocations so that as nearly as perfect a seed crystal as possible is formed. Growing crystals thus inherit the boundaries of previously deformed sections of seed crystals. "The authors thank

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ACCESSION NR: AT4040552

B. A. Prokudin and L. G. Tsinkerling for their assistance in the work." Orig. art. has: 5 figures.

ASSOCIATION: Institut kristallografi AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 00

DATE ACQ: 02Jul64

ENCL: 00

SUB CODE: IC, OP

NO REF SOV: 010

OTHER: 005

Card 2/2

GHZHAN LO-VEY; LIKHACHEVA, Yu.S.; DOBRZHANSKIY, G.F.

Growing of acenaphthene crystals and their piezoelectric
properties. Rost krist. 4:81-84 '64. (MIRA 17:8)